

In the Claims:

Please amend the claims as follows:

1-4 (cancelled)

5. (currently amended) A method for voltage stabilization of an electrical power network system comprising a producing power network system side and a consuming power network side comprising a transformer, a power transmission line with an impedance (Z_{LN}) connected to a primary side of the transformer, a power load connected to a secondary side of the transformer, and an on-line tap changer added to the transformer, wherein a transformer ratio n is controlled through the on-line tap changer trying to keep the voltage (V_2) on the secondary side of the transformer at a voltage reference (V_{ref}), the method comprising:

measuring the impedance of the line in case of dynamic instabilities; and
changing the voltage reference (V_{ref}) of the on-line tap changer, according to a feed forward compensation from the impedance of the line.

6. (previously presented) The method according to claim 5, wherein the feed forward compensation drives the power network system to a stable equilibrium point in a stable region, and wherein the stable region lies below a loci for maximum power transfer $n^2Y_{LD}Z_{LN}=1$, where Y_{LD} is power load admittance, Z_{LN} is transmission line impedance and n is the transformer ratio.

7. (previously presented) The method according to claim 5, wherein the feed forward

compensation is provided by a first order filter $H_f(s) = sT_d/(sT + 1)$, where T and T_d are tuning parameters.

8. (previously presented) The method according to claim 5, wherein a feedback controller is provided according to an equation $V_{fb} = -\max(0, a(n^2 Y_{LD} - 1/Z_{LN}))$, where n is the transformer ratio, Y_{LD} is power load admittance, Z_{LN} is transmission line impedance and a is a tuning parameter that is influencing a region of attraction of an equilibrium point.